

**REMARKS**

Claims 1-24 were originally filed in the present application. Claims 13-24 were subsequently cancelled without prejudice or disclaimer, in response to a restriction requirement. Claim 8 is currently cancelled without prejudice or disclaimer, and new claims 25-37 are currently added. Accordingly, claims 1-7, 9-12 and 25-37 are currently pending in the present application.

Reconsideration of this application in light of the above amendments and the following remarks is requested.

**Rejections under 35 U.S.C. §102(b): Wolf**

**Claim 1**

Claim 1 recites:

1. A method of manufacturing a microelectronics device, comprising:  
    providing a substrate having an active layer, a dielectric layer and a structural layer, wherein the active layer is formed over the dielectric layer and the dielectric layer is formed over the structural layer;  
    forming an opening through the active layer thereby exposing a surface of the dielectric layer and defining active layer sidewalls;  
    forming a spacer covering a first portion of the exposed dielectric layer surface and substantially spanning one of the active layer sidewalls;  
    and  
    forming a gate electrode over the active layer.

Claim 1 was rejected under 35 U.S.C. §102(b) as being anticipated by Wolf, *Silicon Processing for the VLSI Era, Vol. 2*, pages 354-355 (“Wolf”). To sustain this rejection, Wolf must contain all of the above elements of claim 1. However, the Examiner has indicated that previously-pending claim 8 would be allowable if rewritten in independent form including all of the limitations of the base claim. Accordingly, as reflected above, claim 1 is currently amended to include the subject matter of claim 8. Consequently, in view of the Examiner’s implication that Wolf does not disclose the subject matter of previously-pending claim 8, Wolf fails to disclose all of the elements of claim 1, as amended.

Therefore, the §102(b) rejection of claim 1 is not supported by Wolf. Consequently, Applicant respectfully requests the Examiner withdraw the §102(b) rejection of claim 1 in view of Wolf.

Claim 25

New claim 25 recites

25. A method of manufacturing a microelectronics device, comprising:  
providing a substrate having:  
    a structural layer;  
    a dielectric layer located on the dielectric layer; and  
    an active layer located on the dielectric layer;  
forming an opening through the active layer thereby exposing a surface of the dielectric layer and defining active layer sidewalls;  
forming a spacer covering at least a portion of the exposed dielectric layer surface and spanning at least a portion of the active layer sidewalls;  
and  
forming a gate electrode on the active layer.

Claim 25 is also not anticipated under 35 U.S.C. §102(b) by Wolf. That is, claim 25 includes the same subject matter of previously-pending claim 8 that is currently incorporated into claim 1. Consequently, as with claim 1, Wolf fails to disclose all of the elements of claim 25. Therefore, a §102(b) rejection of claim 25 is also not supported by Wolf.

Claim 35

New claim 35 recites:

35. A method of manufacturing a microelectronics device on a substrate that includes a first dielectric layer located over a structural layer, the method comprising:
  - forming an active layer over a portion of the first dielectric layer;
  - forming spacers over the first dielectric layer and adjacent opposing ends of the active layer;
  - forming source/drain regions in the active layer, the source/drain regions extending laterally-inward from the opposing ends of the active layer; and
  - forming a second dielectric layer over at least a portion of the active layer.

Claim 35 is also not anticipated under 35 U.S.C. §102(b) by Wolf. That is, the PTO provides in MPEP §2131 that to anticipate a claim, a reference must teach every element of the claim. Therefore, to sustain a §102(b) rejection with respect to claim 35, Wolf must contain all of the elements of claim 35.

However, Wolf fails to disclose a method of manufacturing a microelectronics device on a substrate that includes a first dielectric layer located over a structural layer, including forming an active layer over a portion of the first dielectric layer, forming spacers over the first dielectric layer and adjacent opposing ends of the active layer, forming source/drain regions in the active layer and extending laterally-inward from the opposing ends of the active layer, and forming a second dielectric layer over at least a portion of the active layer, as recited in claim 35. For example, among other elements of claim 35, Wolf fails to disclose forming a second dielectric layer over at least a portion of an active layer, in the context of claim 35. Therefore, a §102(b) rejection of claim 35 is not supported by Wolf.

Rejections under 35 U.S.C. §102(b): Sun

Claim 1

Claim 1 was also rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,150,286 to Sun, et al. (“Sun”). To sustain this rejection, Sun must contain all of the elements of claim 1.

However, as described above, the Examiner has indicated that previously-pending claim 8 would be allowable if rewritten in independent form including all of the limitations of the base claim. Accordingly, because claim 1 is currently amended to include the subject matter of claim 8, Sun fails to disclose all of the elements of claim 1.

Therefore, the §102(b) rejection of claim 1 is not supported by Sun. Consequently, Applicant respectfully requests the Examiner withdraw the §102(b) rejection of claim 1 in view of Sun.

Claim 25

Claim 25 is also not anticipated under 35 U.S.C. §102(b) by Sun. That is, claim 25 includes the same subject matter of previously-pending claim 8 that is currently incorporated into claim 1. Consequently, as with claim 1, Sun fails to disclose all of the elements of claim 25. Therefore, a §102(b) rejection of claim 25 is also not supported by Sun.

Claim 35

Claim 35 is also not anticipated under 35 U.S.C. §102(b) by Sun. That is, Sun fails to disclose a method of manufacturing a microelectronics device on a substrate that includes a first dielectric layer located over a structural layer, including forming an active layer over a portion of the first dielectric layer, forming spacers over the first dielectric layer and adjacent opposing ends of the active layer, forming source/drain regions in the active layer and extending laterally-inward from the opposing ends of the active layer, and forming a second dielectric layer over at least a portion of the active layer, as recited in claim 35. Therefore, a §102(b) rejection of claim 35 is not supported by Sun.

Rejections Under 35 U.S.C. §103: Wolf

Claim 1

Claims 3-7, 9, 11 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wolf. Applicant traverses this rejection on the grounds that Wolf is defective in establishing a *prima facie* case of obviousness with respect to claim 1.

As the PTO recognizes in MPEP § 2142:

*... The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the Examiner does not produce a prima facie case, the Applicant is under no obligation to submit evidence of nonobviousness...*

It is submitted that, in the present case, the Examiner has not factually supported a *prima facie* case of obviousness for the following mutually exclusive reasons.

**1. Wolf does not teach the claimed subject matter**

As provided in 35 U.S.C. §103:

*A patent may not be obtained ... if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains ... (Emphasis added)*

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, because claim 1 is currently amended to include the subject matter of previously-pending claim 8, and in view of the Examiner's implication that Wolf does not disclose the subject matter of previously-pending claim 8, Wolf fails to teach all limitations of claim 1. Therefore, it is impossible to render obvious the subject matter of claim 1, as a whole, and the explicit terms of §103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness under 35 U.S.C. §103 clearly cannot be met by Wolf with respect to claim 1.

**2. The modification of Wolf is improper**

There is another mutually exclusive and compelling reason why Wolf cannot be applied to reject claim 1 under 35 U.S.C. §103. The MPEP provides in §2142 that:

*...the Examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made.....The Examiner must put aside knowledge of the Applicant's disclosure, refrain from using hindsight, and consider the subject matter claimed 'as a whole'.*

Here, Wolf fails to teach or even suggest the desirability of the Examiner's modification to arrive at the presently-claimed subject matter of claim 1 since, even with such modification, and as implicated by the Examiner, Wolf would still fail to teach the subject matter of previously-pending claim 8 which is currently incorporated into claim 1.

Thus, it is clear that Wolf fails to provide any incentive or motivation supporting the desirability of the Examiner's modification to arrive at the presently-claimed subject matter of claim 1. Therefore, there is simply no basis in the art for modifying Wolf to support a 35 U.S.C. §103 rejection of claim 1.

In this context, the courts have repeatedly held that, absent some teaching, suggestion or incentive supporting modification, obviousness cannot be established by modifying the teachings of the prior art to produce the claimed invention. In the present case, it is clear that the Examiner's modification can arise solely from hindsight based on the invention and without any showing, suggestion, incentive or motivation in Wolf for the modification as applied to claim 1.

Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness under 35 U.S.C. §103 clearly cannot be met with respect to claim 1.

#### Claim 25

Wolf is also defective in establishing a *prima facie* case of obviousness with respect to claim 25 for the following mutually exclusive reasons.

##### **1. Wolf does not teach the claimed subject matter**

As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, because claim 25 includes the subject matter of previously-pending claim 8, and in view of the Examiner's implication that Wolf does not disclose the subject matter of previously-pending claim 8, Wolf fails to teach all limitations of claim 25. Therefore, it is impossible to

render obvious the subject matter of claim 25, as a whole, and the explicit terms of §103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness under 35 U.S.C. §103 clearly cannot be met by Wolf with respect to claim 25.

## **2. The modification of Wolf is improper**

There is another mutually exclusive and compelling reason why Wolf cannot be applied to reject claim 25 under 35 U.S.C. §103. That is, Wolf fails to teach or even suggest the desirability of its modification to arrive at the presently-claimed subject matter of claim 25 since, even with such modification, and as implicated by the Examiner, Wolf would still fail to teach the subject matter of previously-pending claim 8, which is included in claim 25.

Thus, it is clear that Wolf fails to provide any incentive or motivation supporting the desirability of any modification to arrive at the presently-claimed subject matter of claim 25. Therefore, there is simply no basis in the art for modifying Wolf to support a 35 U.S.C. §103 rejection of claim 25.

In this context, the courts have repeatedly held that, absent some teaching, suggestion or incentive supporting modification, obviousness cannot be established by modifying the teachings of the prior art to produce the claimed invention. In the present case, it is clear that any modification of Wolf to arrive at the presently-claimed subject matter of claim 25 can arise solely from hindsight based on the invention and without any showing, suggestion, incentive or motivation in Wolf for the modification as applied to claim 25.

Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness under 35 U.S.C. §103 clearly cannot be met with respect to claim 25.

## Claim 35

Wolf is also defective in establishing a *prima facie* case of obviousness with respect to claim 35 for the following mutually exclusive reasons.

### **1. Wolf does not teach the claimed subject matter**

As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, Wolf fails to teach a method of manufacturing a microelectronics

device on a substrate that includes a first dielectric layer located over a structural layer, including forming an active layer over a portion of the first dielectric layer, forming spacers over the first dielectric layer and adjacent opposing ends of the active layer, forming source/drain regions in the active layer and extending laterally-inward from the opposing ends of the active layer, and forming a second dielectric layer over at least a portion of the active layer, as recited in claim 35. Therefore, it is impossible to render obvious the subject matter of claim 35, as a whole, and the explicit terms of §103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness under 35 U.S.C. §103 clearly cannot be met by Wolf with respect to claim 35.

## **2. The modification of Wolf is improper**

There is another mutually exclusive and compelling reason why Wolf cannot be applied to reject claim 35 under 35 U.S.C. §103. That is, Wolf fails to teach or even suggest the desirability of its modification to arrive at the presently-claimed subject matter of claim 35 since, even with such modification, Wolf would still fail to teach forming a second dielectric layer over at least a portion of an active layer in the context of claim 35, among other elements of claim 35.

Thus, it is clear that Wolf fails to provide any incentive or motivation supporting the desirability of any modification to arrive at the presently-claimed subject matter of claim 35. Therefore, there is simply no basis in the art for modifying Wolf to support a 35 U.S.C. §103 rejection of claim 35.

In this context, the courts have repeatedly held that, absent some teaching, suggestion or incentive supporting modification, obviousness cannot be established by modifying the teachings of the prior art to produce the claimed invention. In the present case, it is clear that any modification of Wolf to arrive at the presently-claimed subject matter of claim 35 can arise solely from hindsight based on the invention and without any showing, suggestion, incentive or motivation in Wolf for the modification as applied to claim 35.

Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness under 35 U.S.C. §103 clearly cannot be met with respect to claim 35.

## **Rejections Under 35 U.S.C. §103: Sun**

### **Claim 1**

Claims 3-7, 11 and 12 were also rejected under 35 U.S.C. §103(a) as being unpatentable over Sun. Applicant traverses this rejection on the grounds that Sun is defective in establishing a *prima facie* case of obviousness with respect to claim 1 for the following mutually exclusive reasons.

#### **1. Sun does not teach the claimed subject matter**

As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, because claim 1 is currently amended to include the subject matter of previously-pending claim 8, and in view of the Examiner's implication that Sun does not disclose the subject matter of previously-pending claim 8, Sun fails to teach all limitations of claim 1. Therefore, it is impossible to render obvious the subject matter of claim 1, as a whole, and the explicit terms of §103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness under 35 U.S.C. §103 clearly cannot be met by Sun with respect to claim 1.

#### **2. The modification of Sun is improper**

There is another mutually exclusive and compelling reason why Sun cannot be applied to reject claim 1 under 35 U.S.C. §103. That is, Wolf Sun fails to teach or even suggest the desirability of the Examiner's modification to arrive at the presently-claimed subject matter of claim 1 since, even with such modification, and as implicated by the Examiner, Sun would still fail to teach the subject matter of previously-pending claim 8 which is currently incorporated into claim 1.

Thus, it is clear that Sun fails to provide any incentive or motivation supporting the desirability of the Examiner's modification to arrive at the presently-claimed subject matter of claim 1. Therefore, there is simply no basis in the art for modifying Sun to support a 35 U.S.C. §103 rejection of claim 1.

In this context, the courts have repeatedly held that, absent some teaching, suggestion or incentive supporting modification, obviousness cannot be established by modifying the teachings of the prior art to produce the claimed invention. In the present case, it is clear that the Examiner's modification can arise

solely from hindsight based on the invention and without any showing, suggestion, incentive or motivation in Sun for the modification as applied to claim 1.

Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness under 35 U.S.C. §103 clearly cannot be met with respect to claim 1.

**Claim 25**

Sun is also defective in establishing a *prima facie* case of obviousness with respect to claim 25 for the following mutually exclusive reasons.

**1. Sun does not teach the claimed subject matter**

As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, because claim 25 includes the subject matter of previously-pending claim 8, and in view of the Examiner's implication that Sun does not disclose the subject matter of previously-pending claim 8, Sun fails to teach all limitations of claim 25. Therefore, it is impossible to render obvious the subject matter of claim 25, as a whole, and the explicit terms of §103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness under 35 U.S.C. §103 clearly cannot be met by Sun with respect to claim 25.

**2. The modification of Sun is improper**

There is another mutually exclusive and compelling reason why Sun cannot be applied to reject claim 25 under 35 U.S.C. §103. That is, Sun fails to teach or even suggest the desirability of its modification to arrive at the presently-claimed subject matter of claim 25 since, even with such modification, and as implicated by the Examiner, Sun would still fail to teach the subject matter of previously-pending claim 8, which is included in claim 25.

Thus, it is clear that Sun fails to provide any incentive or motivation supporting the desirability of any modification to arrive at the presently-claimed subject matter of claim 25. Therefore, there is simply no basis in the art for modifying Sun to support a 35 U.S.C. §103 rejection of claim 25.

In this context, the courts have repeatedly held that, absent some teaching, suggestion or incentive supporting modification, obviousness cannot be established by modifying the teachings of the prior art to

produce the claimed invention. In the present case, it is clear that any modification of Sun to arrive at the presently-claimed subject matter of claim 25 can arise solely from hindsight based on the invention and without any showing, suggestion, incentive or motivation in Sun for the modification as applied to claim 25.

Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness under 35 U.S.C. §103 clearly cannot be met with respect to claim 25.

#### Claim 35

Sun is also defective in establishing a *prima facie* case of obviousness with respect to claim 35 for the following mutually exclusive reasons.

##### **1. Sun does not teach the claimed subject matter**

As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, as described above, Sun fails to teach a method of manufacturing a microelectronics device on a substrate that includes a first dielectric layer located over a structural layer, including forming an active layer over a portion of the first dielectric layer, forming spacers over the first dielectric layer and adjacent opposing ends of the active layer, forming source/drain regions in the active layer and extending laterally-inward from the opposing ends of the active layer, and forming a second dielectric layer over at least a portion of the active layer, as recited in claim 35. Therefore, it is impossible to render obvious the subject matter of claim 35, as a whole, and the explicit terms of §103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness under 35 U.S.C. §103 clearly cannot be met by Sun with respect to claim 35.

##### **2. The modification of Sun is improper**

There is another mutually exclusive and compelling reason why Sun cannot be applied to reject claim 35 under 35 U.S.C. §103. That is, as described above, Sun fails to teach or even suggest the desirability of its modification to arrive at the presently-claimed subject matter of claim 35 since, even with such modification, Sun would still fail to teach forming a second dielectric layer over at least a portion of an active layer in the context of claim 35, among other elements of claim 35.

Thus, it is clear that Sun fails to provide any incentive or motivation supporting the desirability of any modification to arrive at the presently-claimed subject matter of claim 35. Therefore, there is simply no basis in the art for modifying Sun to support a 35 U.S.C. §103 rejection of claim 35.

In this context, the courts have repeatedly held that, absent some teaching, suggestion or incentive supporting modification, obviousness cannot be established by modifying the teachings of the prior art to produce the claimed invention. In the present case, it is clear that any modification of Sun to arrive at the presently-claimed subject matter of claim 35 can arise solely from hindsight based on the invention and without any showing, suggestion, incentive or motivation in Sun for the modification as applied to claim 35.

Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness under 35 U.S.C. §103 clearly cannot be met with respect to claim 35.

**Conclusion**

It is clear from all of the foregoing that independent claims 1, 25 and 35 are in condition for allowance. Dependent claims 2-7, 9-12, 26-34, 36 and 37 depend from and further limit independent claims 1, 25 and 35 and, therefore, are allowable as well.

It is believed that all matters set forth in the Office Action have been addressed, and that claims 1-7, 9-12 and 25-37 are in condition for allowance. Favorable consideration and an early indication of the allowability of the claims are respectfully requested. Should the Examiner deem that an interview with Applicant's undersigned attorney would expedite consideration, the Examiner is invited to call the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

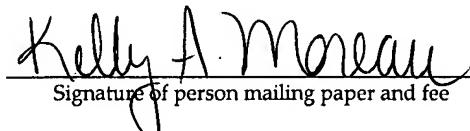


David M. O'Dell  
Registration No. 42,044

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HAYNES AND BOONE, LLP  
901 Main Street, Suite 3100  
Dallas, Texas 75202-3789  
Telephone: 972/739-8630  
IP Facsimile: 214/200-0853  
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Kelly A. Moreau  
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